

Remarks

I. Introduction

Claim 1 is pending in the present application. In view of the foregoing amendment, it is respectfully submitted that the presently pending claim is allowable, and reconsideration is respectfully requested.

II. Rejection of Claim 1 Under 35 U.S.C. § 112

Claim 1 was rejected under 35 U.S.C. § 112, second paragraph as indefinite for failing to particularly point out and distinctly claim the subject matter of the invention. Specifically, the Final Office Action contends that "it is unclear whether there is any relationship between the ... limitation 'cold calender roll' and the limitation 'non-heated profiled calender rolls'." Final Office Action at p. 2. Applicant has amended claim 1 to recite in line 5 of the claim "between non-heated profiled calender rolls" so as to make clear that the calender rolls recited in line 5 of the claim are the same calender rolls recited in line 8 of the claim.

In view of the foregoing, it is respectfully submitted that claim 1 fully complies with the requirements of 35 U.S.C. § 112, and withdrawal of this rejection is therefore respectfully requested.

Applicant further notes that the amendments made to claim 1 place the application in better form for appeal. Accordingly, Applicant respectfully requests that the amendments be entered in this application for this reason.

III. Rejection of Claim 1 Under 35 U.S.C. §103(a)

Claim 1 rejected as being unpatentable under 35 U.S.C. §103(a) over U.S. Patent No 4,496,583 ("Yamamoto") in view of either U.S. Patent No. 5,232,595 ("Meyer") or U.S. Patent No. 4,876,007 ("Narou") and U.S. Patent No. 2,862,542 ("Norton"), and further in view of U.S. Patent No. 4,772,443 ("Thornton et al."), U.S. Patent No. 5,492,580 and German Patent No. 4,024,053 A1 (collectively "Frank") and U.S. Patent No. 3,616,167 ("Gosden"). Applicant respectfully submits that the combination of Yamamoto, Meyer, Narou, Norton, Thornton et al., Frank and Gosden does not render obvious the present claims for the following reasons.

Claim 1 relates to a method for manufacturing a pleated filter material from a thermally bonded non-woven fabric. Claim 1 recites that the method includes the step of forming a single fibrous web from undrawn and drawn synthetic fibers. In addition, claim 1 recites that the method includes the step of preheating the fibrous web. Claim 1 has been amended herein without prejudice to recite that the method includes the step of calendering the single fibrous web between non-heated profiled calender rolls in a single calendering step without subsequent re-heating. Support for this amendment may be found, for example, at page 3, line 37 to page 4, line 1 of the Specification which states that "the calender rolls can be operated ... cold [e.g., non-heated], in the case of a preheated fibrous web." Emphasis added. Furthermore, claim 1 recites that, during the single calendering step, the undrawn fibers in the single fibrous web are bonded in a tension-free manner between non-heated profiled calender rolls to form the non-woven fabric, without inhomogeneities over the cross-section of the non-woven fabric and without the use of flat bonding. In addition, claim 1 recites that, during the single calendering step, spacers are formed in the non-woven fabric to thereby form the filter material.

The Office Action states that the claims are rejected "for the reasons of record set forth in Examiner's Answer in Paper No. 24 ... and for reasons of record set forth on 9-17-03 numbered paragraph 2." Final Office Action at page 3.

Applicant respectfully submits that the combination of Yamamoto, Narou, Norton, Thornton et al., Frank and Gosden does not render obvious claim 1 for at least the reason that the combination of Yamamoto, Narou, Norton, Thornton et al., Frank and Gosden fails to teach or suggest, either separately or in combination, all of the limitations recited in claim 1. For example, the combination of Yamamoto, Narou, Norton, Thornton et al., Frank and Gosden fails to teach or suggest, either separately or in combination, a method for manufacturing a pleated filter material that includes the step of calendering the single fibrous web between non-heated profiled calender rolls in a single calendering step without subsequent re-heating, as recited in amended claim 1. According to the present invention, the Specification states at page 3, line 37 to page 4, line 1 that "the calender rolls can be operated ... cold, in the case of a preheated fibrous web." Emphasis added. The Specification also states at page 2, lines 31 to 34 that "it is advantageous that the finished filter medium, after the spacers have been impressed in the only

calendering process, does not have to be heated again." Emphasis added. The Specification further states at page 2, line 34 to page 5, line1, that "[r]etraactive forces within the filter material which can lead to an unwanted deformation of the spacers are prevented following the manufacture and during the entire service life of the filter insert."

In contrast, for instance, Yamamoto describes one type of process in Examples 17 to 23, in which "a paper-like sheet was formed at a speed of 12 m/min, dried at a temperature of 120°C and, then, wound up." Column 10, lines 28 to 30 (emphasis added). Thus, in Examples 17 to 23, Yamamoto describes that, in the absence of a calendering process -- the Examiner acknowledges that Examples 17 to 23 do not provide a calendering step -- heat is applied in order to dry the fiber sheet. In addition, Yamamoto also describes another type of process in Examples 13 and 14, which the Examiner relies upon to demonstrate that a subsequent reheating step, e.g., a drying step, is not required in Yamamoto when a calender process is performed. However, Yamamoto states that "[t]he sheets produced in Examples 13 and 14 were pressed by using a calender roll ... at a temperature of 180°C in Example 13 and 130°C in Example 14." Column 8, lines 37 to 40, emphasis added. Thus, to the extent that Yamamoto describes that a subsequent re-heating step may be avoided, Yamamoto describes that such re-heating may only be avoided if the calender rolls that are employed are heated. This is in direct contravention with claim 1 as amended, which recites that, after pre-heating the fibrous web, the fibrous web is calendered between non-heated profiled calender rolls in a single calendering step without subsequent re-heating.

The Examiner contends in the Final Office Action that "[t]here is no reason to reheat a resultant filter medium in the ... process [of examples 13 and 14] of Yamamoto et al. ... because it would loosen the inter-fibers bonding in the finished filter medium." Final Office Action at p. 3. This contention is not inconsistent with Applicant's above-stated position because Applicant has not contended that there is no subsequent re-heating in examples 13 and 14 of Yamamoto et al. Rather, Applicant has contended that examples 13 and 14 of Yamamoto et al. do not teach or suggest that, after pre-heating the fibrous web, the fibrous web is calendered between non-heated profiled calender rolls in a single calendering step without subsequent re-heating. With respect to the Examiner's

contention that “it would have been obvious in the art to preheat a fibers web to activate undrawn (i.e. binder) fibers in a fiber web and then to configure the web using a pair of unheated/cold profiled calender rolls for reason of record,” Final Office Action at p. 4, Applicant respectfully maintains that the Examiner provides no support for this contention and that claim 1 as amended herein is allowable for the reasons set forth above.

In addition, Narou also describes that “the filtration membranes can be easily stuck to the filtration unit by .. a method using an adhesive agent cross-linked by heat, a heat-seal method or the like.” Column 9, lines 16 to 21, emphasis added. The additional cited references are not relied upon to disclose, nor do they disclose, a method for manufacturing a pleated filter material that includes the step of calendering the single fibrous web between non-heated profiled calender rolls in a single calendering step without subsequent re-heating, as recited in amended claim 1.

To establish prima facie obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. In re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. In re Merck & Co., Inc., 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim limitations. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). Since the combination of Yamamoto, Narou, Norton, Thornton et al., Frank and Gosden does not teach, or even suggest, all of the limitations of claim 1 as more fully set forth above, it is respectfully submitted that the combination of Yamamoto, Narou, Norton, Thornton et al., Frank and Gosden does not render obvious claim 1.

It is respectfully submitted that the cases of In re Fine, supra, and In re Jones, 21 U.S.P.Q.2d 1941 (Fed. Cir. 1992), make plain that the Office Action’s generalized assertions that it would have been obvious to modify or combine the references do not properly support a § 103 rejection. It is respectfully submitted that those cases make plain that the Office Action reflects a subjective “obvious to try” standard, and therefore does not reflect the proper evidence to support an

obviousness rejection based on the references relied upon. In particular, the Court in the case of In re Fine stated that:

The PTO has the burden under section 103 to establish a *prima facie* case of obviousness. It can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. This it has not done. . . .

....

Instead, the Examiner relies on hindsight in reaching his obviousness determination. . . . One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.

In re Fine, 5 U.S.P.Q.2d at 1598 to 1600 (citations omitted; italics in original; emphasis added). Likewise, the Court in the case of In re Jones stated that:

Before the PTO may combine the disclosures of two or more prior art references in order to establish *prima facie* obviousness, there must be some suggestion for doing so, found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. . . .

Conspicuously missing from this record is any evidence, other than the PTO's speculation (if it be called evidence) that one of ordinary skill . . . would have been motivated to make the modifications . . . necessary to arrive at the claimed [invention].

In re Jones, 21 U.S.P.Q.2d at 1943 & 1944 (citations omitted; italics in original).

That is exactly the case here since it is believed and respectfully submitted that the present Final Office Action offers no evidence whatsoever, but only conclusory hindsight, reconstruction and speculation, which these cases have indicated does not constitute evidence that will support a proper obviousness finding. Unsupported assertions are not evidence as to why a person having ordinary skill in the art would be motivated to modify or combine references to provide the claimed subject matter of the claims to address the problems met thereby. Accordingly, the Office must provide proper evidence of a motivation for modifying or combining the references to provide the claimed subject matter.

More recently, the Federal Circuit in the case of In re Kotzab has made plain that even if a claim concerns a “technologically simple concept” -- which is not the case here -- there still must be some finding as to the “specific understanding or principle within the knowledge of a skilled artisan” that would motivate a person having no knowledge of the claimed subject matter to “make the combination in the manner claimed,” stating that:

In this case, the Examiner and the Board fell into the hindsight trap. The idea of a single sensor controlling multiple valves, as opposed to multiple sensors controlling multiple valves, is a technologically simple concept. With this simple concept in mind, the Patent and Trademark Office found prior art statements that in the abstract appeared to suggest the claimed limitation. But, there was no finding as to the specific understanding or principle within the knowledge of a skilled artisan that would have motivated one with no knowledge of Kotzab's invention to make the combination in the manner claimed. In light of our holding of the absence of a motivation to combine the teachings in Evans, we conclude that the Board did not make out a proper prima facie case of obviousness in rejecting [the] claims . . . under 35 U.S.C. Section 103(a) over Evans.

In re Kotzab, 55 U.S.P.Q.2d 1313, 1318 (Fed. Cir. 2000) (emphasis added). Again, it is believed that there have been no such findings.

In summary, it is respectfully submitted that the combination of Yamamoto, Narou, Norton, Thornton et al., Frank and Gosden does not render obvious amended claim 1. It is therefore respectfully submitted that claim 1 is allowable for these reasons, and withdrawal of this rejection with respect to claim 1 is therefore respectfully requested.

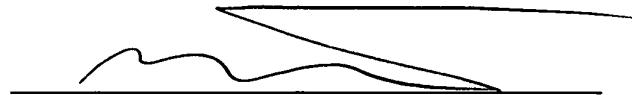
IV. Conclusion

It is therefore respectfully submitted that all of the presently pending claims are allowable. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Applicant further notes that the amendments made to claim 1 herein are believed to overcome, and were made solely to overcome the rejections under 35 U.S.C. 112, paragraph 2, and therefore that the amendments place the application in better form for appeal. Accordingly, Applicant respectfully requests that the amendments be entered in this application.

Respectfully submitted,

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